

CHAPTER 3

SITE ANALYSIS AND USER NEEDS ANALYSIS

3-1. Introduction.

After the site has been selected, the design process will begin with a thorough analysis of the site and the needs of play area users. Input should include information obtained during site visits, from community members, and from relevant guidance documents.

3-2. Coordinate with the Play Area Committee.

The designer will coordinate with the play area committee throughout the design process. The committee may participate in assessing user needs and reviewing preliminary findings of the site inventory and analysis.

3-3. Collect Relevant Documents.

The installation engineer is a resource for obtaining relevant documents needed for the site design.

a. Site Maps. Topographic and infrastructure maps are essential for good design decision making. Topographic maps define grade configurations and landforms. An infrastructure or utilities map includes electrical elements located underground, overhead, and at ground level; sewer and water lines; storm drains; and clean outs.

b. Installation Master Plans and Design Guidelines. Installation design guides and master plans should be obtained. Children's outdoor play areas should be developed in accordance with these documents.

c. Guidance, Standards, and Regulations. All applicable documents that provide design guidance or requirements for the project should be collected. These documents address child safety, age appropriate design, accessibility, materials, and equipment specifications. This manual and applicable referenced documents (appendix A) should be included for guidance. The installation engineer will provide additional guidance documents, if necessary for special site conditions.

d. Product Information. Product information should be obtained from project files or from the manufacturer for any existing play equipment or site furnishings that will be retained in the design. This information will be used to determine the manufacturer's recommendations for equipment layout and maintenance.

e. Current Population Data. Current population distribution information should be obtained from surveys prepared annually by the family housing office.

3-4. Conduct a User Needs Analysis.

The play area design should reflect the needs of the local community who will be using, managing, and maintaining the site. Therefore, the designer and play area committee should work together to gather opinions about local community needs and desires regarding the proposed play area. This community involvement encourages a sense of ownership and responsibility to the finished play area. Some effective methods for involving user groups in determining the play area goals and in selecting play area components include: community workshops, surveys and interviews, walking tours, field trips, and special events, such as play days, mural-making, or model-building activities. Participants may include the play area committee, installation community members, and children and youth. The user needs analysis results should be documented in a written report.

a. Community Workshops. Community workshops are discussion sessions designed for older children, teens, and adults. Creating an environment that fosters free expression is essential for success. When a large group is expected, participants should be divided into small groups during a portion of the workshop to allow greater participation. Questions should be prepared to prompt the discussion. Participants' comments should be recorded. Comments also should be summarized in a workshop report. Besides discussion, community workshops may incorporate walking tours, model-building, and other activities.

b. Interviews. Personal interviews maybe used to gather opinions of community leaders and representatives of community groups. Interview results provide direction for other aspects of the community involvement program, such as the development of workshop agendas or survey questions.

c. Community Surveys. Telephone, mail-in, and door-to-door surveys extend participation beyond residents who normally attend meetings. These techniques are valuable tools for assessing needs and gathering community opinions, ideas, suggestions, and comments from children, youth, and adults. The surveys should be carefully developed and field tested with the intended audience. Survey

staff should be trained to ensure consistency and survey reliability. A representative sample of community members should be surveyed. A report should be developed to document the survey and interview results.

d. Walking Tours. Walking tours of the proposed site allow participants to directly observe and respond to the environment. Tours are suitable for both adults and children. The tour route may be preplanned, or participants may lead the designer to both favorite and least favorite places. Walking tours provide opportunities to inform community members about environmental assets and liabilities. The designer or committee members may gather information from participants during the walking tour. The walking tour should be followed by a discussion and observations should be recorded.

e. Field Trips. Participants may tour play areas in other communities. The designer or committee members can then gather information about what participants liked and did not like about each play area. This input can be summarized in a report.

f. Special Events. A variety of activities, such as mural-making, model-building, and play days, create enjoyable community events that can be used to gather information for play area design. These events may be geared toward children, youth, or entire families. Special events provide an opportunity for media attention and project publicity. During the activity, facilitators can gather community opinions through discussion with participants. Discussion with the participants is more important than the actual product or activity.

3-5. Conduct a Site Inventory and Analysis.

A site inventory will be conducted to identify the natural, manmade, and cultural features that may affect the play area design. Based on the inventory, a site analysis document will be developed to identify design constraints and opportunities.

a. Site Inventory. Site inventory information should be gathered during site visits, and from old site plans, interviews, and reference materials. All information should be recorded on a site plan. Figure 3-1 provides an example of a site inventory.

(1) *Cultural Features.* The character of the site, current use patterns, well-used features on the site, and how the proposed play area will relate to the existing site should be noted. Information about the site's history and the regional history should be obtained. Special historical, cultural, or ethnic features may make play area development desirable or undesirable or may present design opportunities. The installation master plan, user groups, site man-

ager, maintenance personnel, or observations during site visits may provide relevant information.

(2) *Topography and Natural Features.* Site topography can suggest opportunities for spatial organization and play uses. The presence of both sloping and flat surfaces can enhance play opportunities. Natural topographic forms and features such as mounds, large boulders, outcroppings, and slopes should be located, preserved, and integrated into the play area design. Topographic conditions that may effect the play area location and design should be identified and recorded. These include water collection areas, high and low points, flat areas, hills, valleys, and ridges. A topographic map should be prepared if one is not available. Sources for this information include aerial and field-run topographic surveys of the site.

(3) *Existing Utilities.* Existing utility surveys, future development maps, civil or installation engineers, and on-site field observations should be used to identify the location and capacity of current utilities. Water, electricity, storm and sanitary sewers, utility boxes, and telephone lines should be considered in relationship to play area needs and evaluated to determine needed improvements. Potential play area hazards created by utilities should be identified and mitigated.

(4) *Soils and Drainage.* Soil types and drainage should be considered when locating play area components. During the site inventory, soil types should be mapped and evaluated for their ability to support weight (structural bearing capacity), susceptibility to erosion, water permeability, and presence of surface and subsurface rock that may affect construction costs. The ability to provide positive drainage also should be evaluated. A combination of surface and subsurface drainage should be considered for all sites. Sources for this information include the site plan, the installation master plan, the U.S. Soil Conservation Service, and the U.S. Geological Survey.

(5) *Visual Resources.* Any significant views afforded by the site should be noted. These views present design opportunities, such as observation points.

(6) *Microclimate.* Microclimate should be considered when selecting activities, preparing the site layout, and selecting construction materials. Wind, sun, heat, cold, drifting snow, sand, and dampness are climatic conditions that may need to be mitigated through the design. Prominent microclimate characteristics, such as sun, shade, and wind direction should be mapped during the site inventory. Sources for this information include site investigations and persons familiar with seasonal site characteristics.

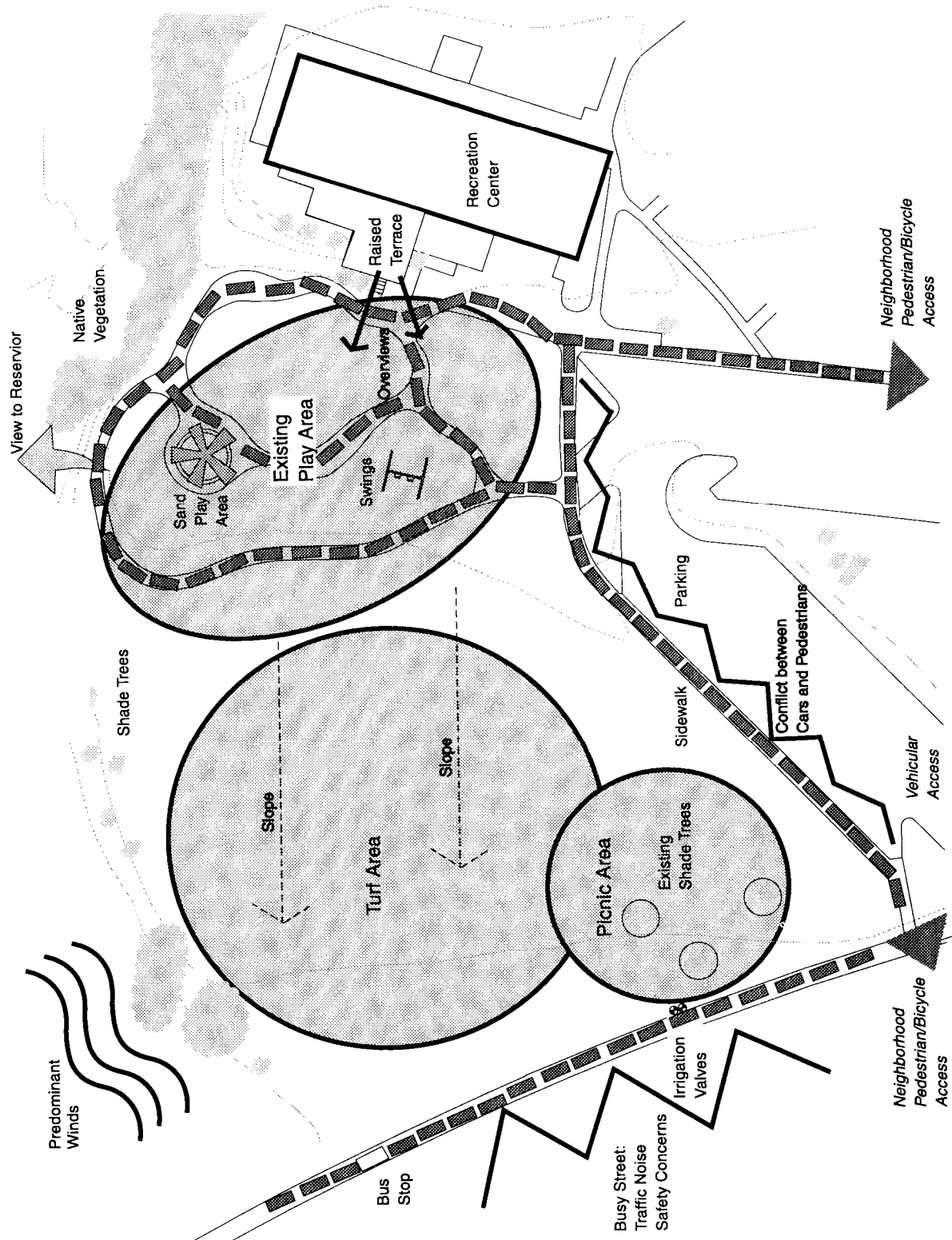


Figure 3-1. Site Inventory.

(7) *Existing Vegetation.* The type, size health, and location of existing plant materials should be noted during the site inventory. These plants should be retained whenever possible. Toxic and poisonous plant materials should be identified for removal.

(8) *Existing Play Equipment and Structures.* Based on the results of a safety inspection and structural analysis of existing play equipment or structures, equipment and structures that can be retained, relocated, or removed should be identified and located on the site inventory.

(9) *Adjacent Land Uses.* The need for screening or visibility from adjacent areas should be noted. Traffic or other adjacent land use concerns should be indicated.

b. Site Analysis. Based on the site inventory, a site analysis will be developed to record the existing site conditions, opportunities, and constraints. This information should be mapped on a site plan (fig 3-2). The site analysis also should be described in a written report that documents issues and possible solutions.

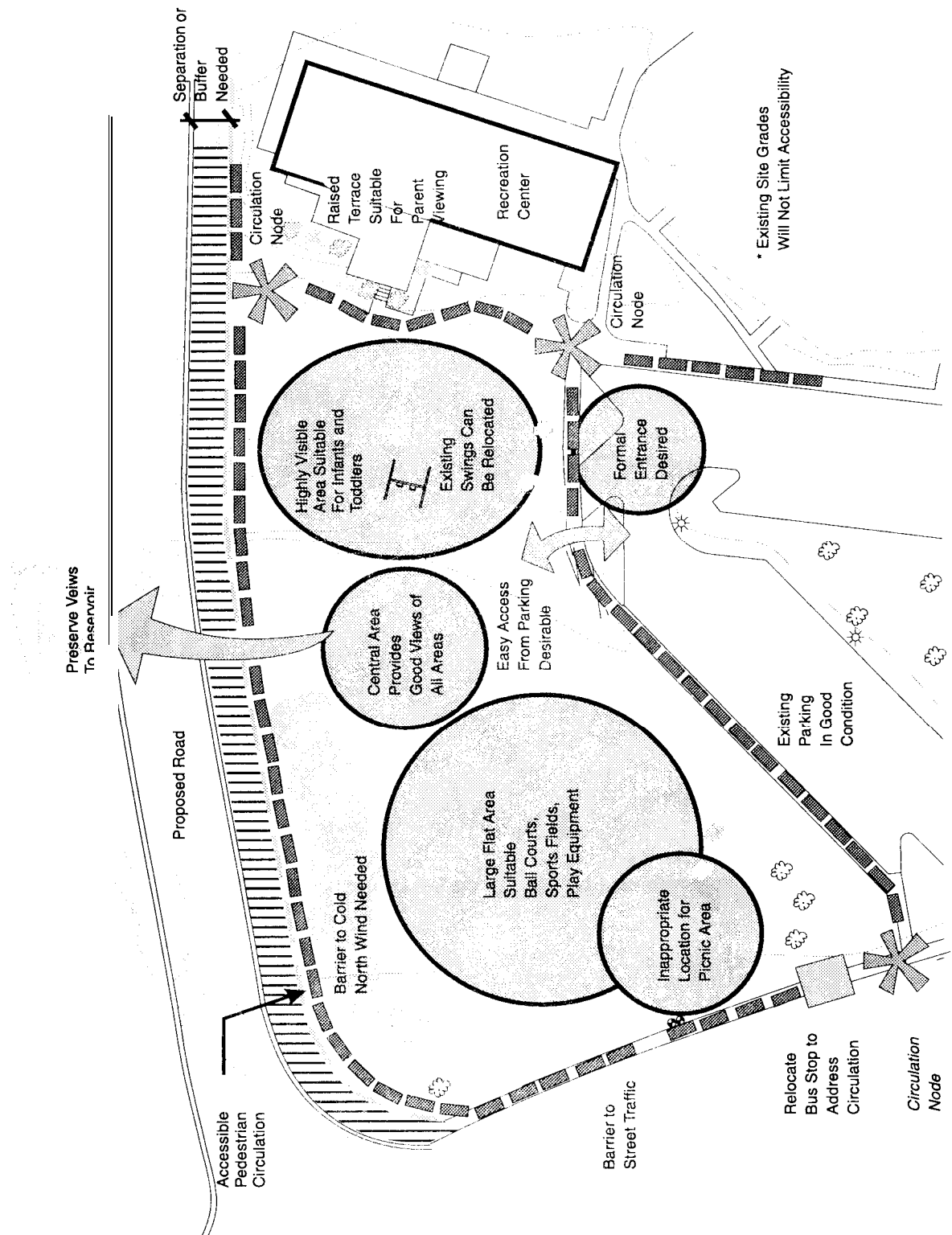


Figure 3-2. Site Analysis.